

REMARKS

Entry of the foregoing and reconsideration of the application identified in caption, as amended, pursuant to and consistent with 37 C.F.R. §1.111 and in light of the remarks which follow, are respectfully requested.

At the outset, Applicants affirm the election of claims 17-30 set forth at page 5 of the Official Action.

By the above amendments, claims 1-16, 27 and 31 have been canceled without prejudice or disclaimer. Claim 17 has been amended to recite that the assembly comprises an inlet connected to receive a flow of the fluid, and an outlet connected to pass the flow of the fluid from the assembly. Support for this amendment can be found in the specification at least from page 18, line 23 to page 19, line 2. Claim 17 has also been amended for readability purposes by replacing "is comprised of" with "comprises," as well as for clarification purposes by deleting various subject matter. Claim 17 has further been amended to recite modifying the flow dynamics of said fluid by introducing a first portion of the flow of the fluid to the first chamber, and a second portion of the flow of the fluid to the second chamber. Support for this amendment can be found in the specification at least at page 23, line 16 to page 24, line 3.¹

Claims 18-30 have been amended for readability purposes by replacing the phrase "as recited in" with "according to." Claim 18 has been amended for readability purposes by replacing "stems" with "stem." Claims 20 and 21 have been amended for clarification purposes to recite the phrase "after the target specific binding agent binds with the biological target." Claim 22 has been amended for clarification by replacing the term "second chamber" with "capture zone," and to depend from claim 35. Claims 23 and 26 have been amended for

¹ In the Preliminary Amendment filed June 28, 2004, the word "modifying" recited in claim 17 was incorrectly reproduced as "modify." This clerical error has been corrected in the listing of claims provided herewith.

clarification, and now recite "an inner wall of the first chamber." Claim 28 has also been amended to depend from claim 25 in light of the cancellation of claim 27. Claims 28 and 30 have been amended for readability purposes by replacing "comprised of" with "comprising."

New claims 32-35 depend from claim 17, and are directed to additional aspects of the process. Support for new claim 32 can be found in the specification at least at page 23, lines 3-9, taken in connection with Figure 9b. Support for new claim 33 can be found in the specification at least at page 6, line 21, taken in connection with page 25, lines 1-3, page 31, lines 19-23 and page 12, lines 8-13. Support for new claim 34 can be found at least in Figures 1-6, 8 and 10-12, taken in connection with the description of such figures in the specification. Support for new claim 35 can be found in the specification at least from page 18, line 23 to page 19, line 2, taken in connection with Figures 1-6, 8 and 10-12. New dependent claims 36 and 37 are directed to subject matter deleted from claim 17.

In the Official Action, claims 20, 21, 27 and 28 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite. Without addressing the propriety of this rejection, and in an effort to expedite prosecution of the application, claim 27 has been canceled,² and claims 20 and 21 have been amended to recite that the morphological characteristic of said biological target is modified "after the target specific binding agent binds with the biological target," as discussed above. Applicants submit that claims 20 and 21 as amended fully comply with the provisions of the second paragraph of 35 U.S.C. §112. Accordingly, withdrawal of the above rejection is respectfully requested.

Claims 17, 24-27, 29 and 30 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,133,363 (*Guirguis*). Withdrawal of this rejection is respectfully requested for at least the following reasons.

² The objection to the specification set forth at page 6 of the Official Action is moot in light of the cancellation of claim 27.

Independent claim 17 is directed to a process for treating biological targets within the fluid of a biological organism, comprising the steps of: (a) feeding a fluid into an assembly comprising an inlet connected to receive a flow of the fluid, and an outlet connected to pass the flow of the fluid from the assembly, wherein said assembly comprises a first chamber and a second chamber, wherein said first chamber comprises a target specific binding agent, wherein said fluid comprises a biological target, and (b) modifying the flow dynamics of said fluid by introducing a first portion of the flow of the fluid to the first chamber, and a second portion of the flow of the fluid to the second chamber.

Guirguis does not disclose each feature recited in claim 17, and as such fails to constitute an anticipation of such claim. For example, *Guirguis* does not disclose modifying the flow dynamics of said fluid by introducing a first portion of the flow of the fluid to the first chamber, and a second portion of the flow of the fluid to the second chamber, as recited in claim 17. In this regard, the Official Action does not provide any explanation as to how *Guirguis* constitutes an anticipation of the claimed step of modifying the flow dynamics of said fluid. In light of such deficiency, it is also apparent that *Guirguis* fails to disclose modifying the flow dynamics of said fluid by introducing a first portion of the flow of the fluid to the first chamber, and a second portion of the flow of the fluid to the second chamber, as recited in claim 17.

Furthermore, *Guirguis* does not disclose feeding a fluid into an assembly comprising an inlet connected to receive a flow of the fluid, and an outlet connected to pass the flow of fluid from the assembly, as recited in claim 17. By comparison, *Guirguis* discloses that "[t]he shuttle storage unit 30 is unscrewed from the tubular connection unit 22 with the shuttle resin/sample container 70 contained therein, the transporter assembly 50 remaining with the tubular collection unit 22 and cap 40 is screwed on threaded end 34 to keep the

sample in a secured contained condition" (col. 6, lines 36-41) (emphasis added). There is simply no disclosure that the *Guirguis* sample collection apparatus comprises both an inlet connected to receive a flow of the fluid, and an outlet connected to pass the flow of fluid from the assembly, as recited in claim 17.

For at least the above reasons, *Guirguis* does not constitute an anticipation of independent claim 17. Accordingly, withdrawal of the above rejection is respectfully requested.

Claims 18, 19, 22 and 23 stand rejected under 35 U.S.C. §103(a) as being obvious over *Guirguis* in view of U.S. Patent No. 4,714,680 (*Civin*) and in light of Nature Biotechnology, 2000 (*Eppich et al*). Claim 20 stands rejected under 35 U.S.C. §103(a) as being obvious over *Guirguis* in view of *Civin* and in light of *Eppich et al*, and further in view of U.S. Patent No. 5,686,281 (*Roberts*). Claim 21 stands rejected under 35 U.S.C. §103(a) as being obvious over *Guirguis* in view of U.S. Patent No. 5,399,580 (*Daluge*). Claim 28 stands rejected under 35 U.S.C. §103(a) as being obvious over *Guirguis* in view of International Publication No. WO 00/68689 (*WO '689*). Withdrawal of the above rejections is respectfully requested for at least the following reasons.

As discussed above, *Guirguis* fails to disclose or suggest modifying the flow dynamics of said fluid by introducing a first portion of the flow of the fluid to the first chamber, and a second portion of the flow of the fluid to the second chamber, as recited in claim 17. In addition, *Guirguis* does not disclose or suggest feeding a fluid into an assembly comprising an inlet connected to receive a flow of the fluid, and an outlet connected to pass the flow of fluid from the assembly, as recited in claim 17.

The secondary applied documents fail to cure the above deficiencies of *Guirguis*. In this regard, the Patent Office has relied on *Civin* for disclosing the isolation of a stem cell for

therapeutic applications (Official Action at page 11). *Eppich et al* has been relied on for disclosing the size of hematopoietic stem cells, and *Roberts* has been relied on for disclosing the introduction of chimeric constructs into hematopoietic stem cells (Official Action at page 12). The Patent Office has relied on *Daluge* for disclosing denaturing virus particles, and on *WO '689* for disclosing the use of multiple zones in sequence wherein each zone comprises a separate binding molecule (Official Action at pages 13 and 14). However, like *Guirguis*, each of the above secondary applied documents fails to disclose or suggest modifying the flow dynamics of said fluid by introducing a first portion of the flow of the fluid to the first chamber, and a second portion of the flow of the fluid to the second chamber, as recited in claim 17. In addition, the secondary applied documents do not disclose or suggest feeding a fluid into the claimed assembly comprising, *inter alia*, an inlet connected to receive a flow of the fluid, and an outlet connected to pass the flow of fluid from the assembly, as recited in claim 17.

For at least the above reasons, it is apparent that no *prima facie* case of obviousness exists.³ Accordingly, withdrawal of the above §103(a) rejections is respectfully requested.

From the foregoing, further and favorable action in the form of a Notice of Allowance is believed to be next in order, and such action is earnestly solicited.

³ It is respectfully submitted that new claims 32-37 are allowable over the applied art for at least the same reasons set forth above with respect to independent claim 17.

If there are any questions concerning this paper or the application in general, the Examiner is invited to telephone the undersigned.

Respectfully submitted,

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